AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-21 (Cancelled)

22. (Currently Amended) A method of monitoring a cardiovascular access during an extracorporeal blood treatment, comprising the steps of:

providing an extracorporeal blood circuit comprising an arterial branch and a venous branch, the arterial branch connecting an arterial needle inserted into a patient to an inlet of a blood treatment device, the venous branch connecting an outlet of the blood treatment device to a venous needle inserted into a patient;

providing a conductive connection between the arterial branch and the venous branch, said conductive connection having first and second connection locations, wherein said first connection location is located upstream of the blood treatment device and said second connection location is located downstream of said blood treatment device;

circulating blood in the extracorporeal blood circuit;

generating a potential difference between the arterial branch and the venous branch;

detecting a value of a quantity corresponding to an electric current along at least one portion of the venous branch, said at least one portion being between the conductive connection and the venous needle; and

comparing the detected value to a reference range.

23. (Previously Presented) A method according to claim 22, wherein an end of the conductive connection is located on the venous branch between the venous needle and a bubble trap, said bubble trap being connected to the venous branch.

24. (Previously Presented) A method according to claim 22, wherein an end of the conductive connection is located on the arterial branch between the arterial needle and a peristaltic pump arranged on the arterial branch.

25. (Previously Presented) A method according to claim 22, wherein said quantity corresponding to an electric current is a voltage drop.

26. (Previously Presented) A method according to claim 22, wherein a capacitive coupler connects the conductive connection to the arterial branch.

27. (Previously Presented) A method according to claim 22, wherein a capacitive coupler connects the conductive connection to the venous branch.

28. (Previously Presented) A method according to claim 22, wherein a detector circuit is provided on said conductive connection, said detector circuit being configured to perform said detecting of the value.

29. (Previously Presented) A method according to claim 22, wherein a generator circuit is provided on said conductive connection, said generator circuit being configured to perform said generating the potential difference.

30. (Previously Presented) A method in accordance with claim 22, wherein a detector circuit is configured to perform said detecting the value, said detector circuit being connected to the venous branch at first and second points, said first and second points being located on said at least one portion of the venous branch.

31. (Previously Presented) A method according to claim 30, wherein a first capacitive coupler connects the detector circuit to the venous branch at said first point, and a second capacitive coupler connects the detector circuit to the venous branch at said second point.

32. (Previously Presented) A method according to claim 22, wherein a generator circuit generates the potential difference, said generator circuit being connected to earth.

33. (Currently Amended) A device for monitoring a cardiovascular access during an extracorporeal blood treatment comprising:

a conductive connection arranged between a first passage point of an arterial branch of an extracorporeal blood circuit, and a second passage point of a venous branch of the extracorporeal blood circuit;

a voltage generator circuit configured to generate a potential difference between said first and second passage points when the extracorporeal blood circuit is connected to a patient through an arterial needle and a venous needle;

a detector circuit configured to detect a value of a quantity corresponding to an electric current along at least one section of the extracorporeal circuit, said at least one section of the extracorporeal circuit comprising:

a portion of the venous branch between the second passage point and the venous needle;

~~a patient cardiovascular system;~~

a portion of the arterial branch between the arterial needle and the first passage point; and

the conductive connection; and

a comparator circuit configured to compare the value to a reference range.

34. (Previously Presented) A device according to claim 33, comprising an extracorporeal blood circuit having a first point of an arterial branch located at the first passage point, and a second point of a venous branch located at the second passage point.

35. (Previously Presented) A device according to claim 34, wherein said second point is located between the venous needle and a bubble trap, said bubble trap being arranged along the venous branch.

36. (Previously Presented) A device according to claim 34, wherein said first point is located between the arterial needle and a peristaltic pump, said peristaltic pump being arranged on the arterial branch.

37. (Previously Presented) A device according to claim 33, wherein a capacitive coupler is arranged substantially on said first passage point.

38. (Previously Presented) A device according to claim 33, wherein a capacitive coupler is arranged substantially on said second passage point.

39. (Previously Presented) A device according to claim 37 or 38, wherein the capacitive coupler comprises at least one metal tube, said metal tube being wound around a respective portion of the extracorporeal blood circuit.

40. (Previously Presented) A device according to claim 33, wherein the detector circuit is arranged substantially on the conductive connection.

41. (Previously Presented) A device according to claim 33, wherein the voltage generator circuit is arranged substantially on the conductive connector.

42. (Previously Presented) A device according to claim 33, wherein the detector circuit is connected to the venous branch at a first connection point and a second connection point, said first and second connection points being located on said portion of the venous branch between the second passage point and the venous needle.

43. (Previously Presented) A device according to claim 33, wherein the voltage generator circuit is connected to earth.

44. (Previously Presented) A device according to claim 33, wherein the detector circuit is a voltage drop detector.

45. (Previously Presented) A device according to claim 33, wherein the comparator circuit is configured to output at least one control signal when the value is outside the reference range.

46. (Previously Presented) A device according to claim 33, further comprising at least one capacitive coupler, said at least one capacitive coupler being connected to the voltage generator circuit and the extracorporeal blood circuit.

47. (Previously Presented) A device according to claim 33, further comprising at least one capacitive coupler, said at least one capacitive coupler being connected to the detector circuit and the extracorporeal blood circuit.

48. (Previously Presented) A device according to claim 33, wherein the voltage generator circuit is connected to the extracorporeal blood circuit and the voltage generator circuit is also connected to earth.